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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/863,808	05/22/2001	Elisabeth Smela	S-522,000	8928

7590

03/12/2003

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EXAMINER

DOUGHERTY, THOMAS M

ART UNIT

PAPER NUMBER

2834

DATE MAILED: 03/12/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/863,808

Applicant(s)

SMELA ET AL.

Examiner

Thomas M. Dougherty

Art Unit

2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 May 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) 6-15 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 6-15 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-4 are rejected under 35 U.S.C. 102(e) as being anticipated by Keen (US 6,326,215). Keen notes use of a conducting polymer as an electrochemical actuator (col. 19, ll.43 to col. 20, l. 8) comprising a high-conductivity conjugated polymer.

The high-conductivity conjugated polymer is prepared from a monomer selected from the group consisting of aniline, pyrrole, thiophene, phenylene vinylene, and derivatives thereof.

The derivatives comprise derivatives that generate high-conductivity conjugated polymers when polymerized.

While specific electrical conductivity and linear expansion are not noted as the described structure yields a high-conductivity conjugated polymer, and as the structure

as claimed is read on by Keen, such conductivity and expansion requirements are inherently met by Keen.

Claims 1-3 are rejected under 35 U.S.C. 102(b) as being anticipated by Matsushita (JP 2000-133854). Matsushita shows an electrochemical actuator comprising a high-conductivity conjugated polymer having an electrical conductivity of ≥ 100 S/cm.

Said electrochemical actuator actuates by linear extension/contraction. The high-conductivity conjugated polymer is prepared from a monomer selected from the group consisting of aniline, pyrrole, thiophene, phenylene vinylene, and derivatives thereof.

Note that as Matsushita shows the claimed structural features, the recitation of high conductivity is regarded as being inherently met.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Keen (US 6,326,215). Given the invention of Keen as noted above he doesn't note that derivatives are selected from the group consisting of C1-C10 alkyl-, C1-C10 alkoxy-,

halo-, nitro-, cyano-, and ester-substituted monomers. It would have been obvious to one having ordinary skill in the art to use any of the said derivatives in the device of Keen at the time the invention was made since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

Claims 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Keen (US 6,326,215) in view of Matsushita (JP 2000-133854). Given the inventions of Keen and Matsushita as noted above, Matsushita does not describe derivatives which comprise derivatives that generate high-conductivity conjugated polymers when polymerized or derivatives which are selected from the group consisting of C1-C10 alkyl-, C1-C10 alkoxy-, halo-, nitro-, cyano-, and ester-substituted monomers.

It would have been obvious to one having ordinary skill in the art to employ for the derivatives which comprise derivatives that generate high-conductivity conjugated polymers when polymerized of the invention of Matsushita was made such as is taught by Keen since this is a feature which can be tailored in a structure, thus making the device employing it more versatile.

As noted, it would have been obvious to one having ordinary skill in the art to use any of the said derivatives in the device of Keen at the time the invention was made since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

Conclusion

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The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The remaining prior art shows at least some features of the claimed invention.

Direct inquiry concerning this action to Examiner Dougherty at (703) 308-1628.

and
tmd

March 7, 2003

Thomas M. Dougherty
THOMAS M. DOUGHERTY
PRIMARY EXAMINER
GROUP 2100
2/10